

## Process Oils

Calsol process oils are refined from a select blend of crudes using a multistage hydrogenation process. This severe hydrotreating process offers the unique ability to produce naphthenic process oils that meet currently established performance standards as well as those to be developed in the future. Careful selection and blending of domestic crudes, step by step computer controlled refining and the ultra-high pressure catalytic processes develop excellent product performance. The quality assurance practices that Calumet brings to bear on crude oil selection and subsequent refining processes assure consistent uniformity and product performance.

### OIL SELECTION GUIDE FOR CALSOL PROCESS AND EXTENDER OILS

←..... Calsol Recommendation .....→

COMPOUNDING POLYMER FOR:→	General Purpose	Maximum Compatibility	Max. Color Stability	Minimum Volatility	Low Temp Flexibility	High Temp Resistance
Butyl (IIR)	P910 thru P9250 ** 510 thru 5240 **	P910	P910 5550	P9250 5160S	P910	P9250 5160S
Ethylene Propylene (EPR) (EPM)	P910 thru P9250 ** 5550	P910 5550	P910, P950 ** 5550	P9250 5160S	P910	P9250
Ethylene Propylene Diene (EPT) (EPDM)	P910 thru P9250 ** 510 thru 5240 ** 810 thru 8240 **	P910 810 thru 8240 **	P910 5550	P9250 5240 5160S	P910	P9250 5240 5160S
Natural (NR)	P910 thru P9250 ** 510 thru 5160S **	P910 510	P910 5550	P9250 5160S 5240	P910	P9250 5160S 5240
Neoprene (CR) Polychloroprene	810 thru 8240 **	See Max Oil Loading s. (PHR) listed in table below	5550	8240	510	8240
Polyisoprene (IR)	P910 thru P9250 ** 510 thru 5160S **	P910 510	P910 5550	P9250 5160S 5240	P910	P9250 5160S 5240
Polybutadiene (BR)	P910, P950 510 thru 5240 ** 810 thru 8240 **	510 810	5550	5160S 8240	P910	5160S 8240
Styrene-butadiene (SBR)	P950 810 thru 8240 **	810	P910 5550	5160S 8240	P910 510	8240
Thermoplastic, Styrenic (SBS) (YSBR) (SIS) (SEBS)	P910, P9250 ** 510 thru 5240 **	Calsol 5 series **	5550	P950 5160S	P910 510	P9250 5240, 5160S
Thermoplastic, Olefinic	510 thru 5240 **	P910, P950 ** 510 thru 5240 **	5550	P9250 5240	P910	P950 P9250

\*\*Specific grade used depends on volatility requirements

Max Oil Loading (PHR) for Various Neoprenes				
Grade:	GNA	W	WHV	T
Calsol 510	15	25	22	25
Calsol 810	20	30	22	30
Calsol 8240	20	22	22	25

**Calsol P9 Series Oils:** Calsol P910, P950, P9250 are highly refined paraffinic oils having excellent color, stability, and low volatility.

**Calsol 8 Series Oils:** Calsol 810, 850, 8240 are high VGC, highly refined naphthenic oils with a high level of naphthenic content that the rubber industry considers to be optimum for compatibility with unsaturated elastomers. Their low polar compounds provide good color stability.

**Calsol 5 Series:** Calsol 510, 5550, 5160S are very highly refined naphthenic oils with intermediate levels of naphthenic content. They have good compatibility with better resistance to color degradation than the Calsol 8 series.